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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/869,664	06/28/2001	Junichi Sato	5077-000050	7036

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EXAMINER	
NG, CHRISTINE Y	
ART UNIT	PAPER NUMBER
2663	

DATE MAILED: 01/13/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/869,664	SATO ET AL.	
	Examiner	Art Unit	
	Christine Ng	2663	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *28 June 2001*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-31* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-9,11-13,16,17,19,20,22,27 and 28* is/are rejected.

7)☒ Claim(s) *10,14,15,18,21,23-26 and 29-31* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *28 June 2001* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *8/28/01*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Specification

1. The abstract of the disclosure is objected to because it is too long. Correction is required. See MPEP § 608.01(b).

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1, 2, 7, 8, 12, 19, 20, 27 and 28 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 5,915,207 to Dao et al.

Referring to claim 1, Dao et al disclose in Figures 3A and 3B an information transmission method comprising the steps of:

Monitoring (step 70) transmission bandwidth (B1) for transmitting data to and receiving data from a transmitter terminal (space segment 24). Refer to Column 6, lines 28-41.

Determining a procedure (type of data requested) of requesting for data with a request for transmission (by mobile users 30) being employed as input. Refer to Column 4, lines 7-12 and Column 5, line 63 to Column 6, line 1.

Controlling a service method (step 72 or steps 74-78) of a cache (database 36) in accordance with information on bandwidth (B1) of said transmitter terminal (space segment 24) and said request for data (from mobile users 30). The service method

depends on whether or not there is enough bandwidth B1 and the type of data the user requested. Refer to Column 6, lines 41-59.

Referring to claim 2, Dao et al disclose in Figures 3A and 3B the step of allowing a user (mobile user 30) to input said request for transmission. Refer to Column 5, line 63 to Column 6, line 1.

Referring to claim 7, Dao et al disclose in Figures 3A and 3B that the information transmission method further comprises:

Monitoring (step 70) transmission bandwidth (B2) for transmitting data to and receiving data from a receiver terminal (mobile user 30). Refer to Column 6, lines 28-41.

Allowing a user (mobile user 30) to input said request for transmission at said receiver terminal (mobile user 30). Refer to Column 5, line 63 to Column 6, line 1.

Controlling a service method (step 72 or steps 74-78) of said cache (database 36) in accordance with information on bandwidth (B2) of said receiver terminal (mobile user 30). The service method depends on whether or not there is enough bandwidth B2 and the type of data the user requested. Refer to Column 6, lines 41-59.

Referring to claim 8, Dao et al disclose in Figures 3A and 3B controlling a method for transferring data in accordance with the bandwidth information (B1) of said transmitter terminal (space segment 24), the bandwidth information (B2) of said receiver terminal (mobile user 30), and said request for data (from mobile user 30). Refer to Column 6, lines 23-59.

Referring to claim 12, Dao et al disclose in Figures 3A and 3B that the transmission method further comprises the steps of:

Accumulating contents (in memory 50) having a communication rate as supplementary information. Refer to Column 6, lines 38-41.

Allowing said accumulated contents (in memory 50) to be inputted, and transmitting said accumulated contents while bandwidth of said accumulated contents (in memory 50) is being controlled (step 72 or steps 74-78) in accordance with said supplementary information to thereby transmit said accumulated contents (in memory 50) at the specified communication rate. If available bandwidth is sufficient, the information is transmitted without bandwidth filtering. If available bandwidth is not sufficient, the information is transmitted according the steps 74-78 to reduce its bandwidth. Refer to Column 6, lines 38-59.

Referring to claim 19, Dao et al disclose in Figure 2 an information transmission system comprising:

A transmitter terminal communication interface (antenna 27) for transmitting data to and receiving data from at least one transmitter terminal (space segment 24). Refer to Column 4, lines 35-39.

A transmitter terminal bandwidth monitor portion (software proxy process 39 – bandwidth-based filtering scheme) for monitoring a transmission bandwidth (B1) for transmitting data to and receiving data from said transmitter terminal (space segment 24). Refer to Column 6, lines 23-59.

A storage portion (memory 50) for accumulating data. Refer to Column 5, lines 6-12.

A request management portion (antenna 35) for allowing a request (from mobile user 30) for a transmission to be inputted and determining a procedure (type of data requested) of the request to be outputted. Refer to Column 4, lines 7-12; Column 5, lines 33-34; and Column 5, line 63 to Column 6, line 1.

A data management portion (software proxy process 39) for controlling a method for using said storage portion (memory 50) in accordance with bandwidth information (B2) of the transmitter terminal (space segment 24) monitored by said transmitter terminal bandwidth monitor portion (software proxy process 39 – bandwidth-based filtering scheme) and the request from said request management portion (antenna 35). Refer to Column 6, lines 23-59.

Referring to claim 20, Dao et al disclose in Figure 2 means (antenna 35) for allowing a user to input said request for a transmission. Refer to Column 4, lines 7-12; Column 5, lines 33-34; and Column 5, line 63 to Column 6, line 1.

Referring to claim 27, Dao et al disclose in Figure 2 that the information transmission system comprises:

A receiver terminal communication interface (antenna 35) for transmitting data to and receiving data from at least one receiver terminal (mobile user 30). Refer to Column 5, lines 33-34 and Column 5, line 63 to Column 6, line 1.

A receiver terminal bandwidth monitor portion (software proxy process 39 – bandwidth-based filtering scheme) for monitoring transmission bandwidth (B2) for

transmitting data to and receiving data from said receiver terminal (mobile user 30). Refer to Column 6, lines 23-59.

Means for inputting (antenna 35) said request for a transmission at said receiver terminal (mobile user 30). Refer to Column 5, lines 33-34 and Column 5, line 63 to Column 6, line 1.

Said information transmission system wherein:

Said data management portion (software proxy process 39) has further a function for controlling a method for using said storage portion (memory 50) in accordance with the bandwidth information (B2) of the receiver terminal (mobile user) monitored by said receiver terminal bandwidth monitor portion (software proxy process 39 – bandwidth-based filtering scheme). Refer to Column 6, lines 23-59.

Referring to claim 28, Dao et al discloses in Figures 3A and 3B that said data management portion (software proxy process 39) has further a function for controlling a method for transferring data in accordance with bandwidth information (B1) of the transmitter terminal (space segment 24) monitored by said transmitter terminal bandwidth monitor portion (software proxy process 39 – bandwidth-based filtering scheme), bandwidth information (B2) of the receiver terminal (mobile user 30) monitored by said receiver terminal bandwidth monitor portion (software proxy process 39 – bandwidth-based filtering scheme), and a request from said request management portion (antenna 35). Refer to Column 6, lines 23-59.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claims 3-5, 16 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,915,207 to Dao et al.

Referring to claim 3, Dao et al do not specifically disclose that upon acquirement of information, using a load management rule to provide an information storage method for reducing a transmission bandwidth used for acquiring the information.

However, Dao et al disclose in Figure 4 another embodiment of the invention that utilizes a user-based filtering scheme. Upon acquirement of information, the base station 26 uses a load management rule (user-based filtering scheme) to provide an information storage method (memory 50). Base station 26 uses a memory 50 to hold a copy of the database information so that the space segment 24 only needs to carry changes necessary to update the memory 50's copy of the information. Base station 26 only disseminates information to mobile users 30 when changes occur to the copy in memory 50. Refer to Column 7, lines 9-25. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include that upon acquirement of information, using a load management rule to provide an information storage method; the motivation being that the rule optimizes the utilization of bandwidth

and conserves bandwidth since entire copies of information do not have to be repeatedly sent to the base station.

Referring to claim 4, Dao et al do not specifically disclose that upon acquirement of information, using an information freshness management rule to provide an information storage method for improving freshness of information to be accumulated.

However, Dao et al disclose in Figure 5 another embodiment of the invention that utilizes an active broadcast protocol. Upon acquirement of information, the base station 26 uses an information freshness management rule (set of rules 90) to provide an information storage method (memory 50). Each mobile user 30 defines a set of rules 90 that identifies its information of interest and sends to the broadcast server 22. The broadcast server 22 applies the set of rules 90 against information in database 36 and sends information to the mobile uses 30 when relevant changes has occurs. Refer to Column 7, lines 26-52. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include an information freshness management rule to provide an information storage method; the motivation being to send relevant, updated information to mobile users without delay.

Referring to claim 5, refer to the rejection of claims 3 and 4.

Referring to claim 16, Dao et al do not specifically disclose determining whether said transmitter terminal transmits information itself in accordance with supplementary information of contents or only a storage source of information and a description of a condition for acquiring information from the storage source of information.

However, Dao et al disclose in Figure 4 another embodiment of the invention using a user-based filtering scheme. The transmitter terminal (space segment 24) occasionally sends a copy of the information or changes to the copy of information to base station 26. Base station 26 stores the copy in memory 50. Base station 26 also includes a description of a condition (record 51) that stores information of interest for each mobile user 30 for acquiring information from the storage (memory 50). Refer to Column 7, lines 9-25. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include determining whether said transmitter terminal transmits information itself in accordance with supplementary information of contents or only a storage source of information and a description of a condition for acquiring information from the storage source of information, the motivation being so that the transmitter terminal does not have to send the whole set of information to the mobile users when changes occur to the information. Mobile users can specify which part of the information they request and are sent only updated changes relating to their request, thereby saving bandwidth.

Referring to claim 17, Dao et al do not specifically disclose selecting information to be acquired by said receiver terminal from the storage source of information in accordance with supplementary information of contents.

However, Dao et al disclose in Figure 4 another embodiment of the invention using a user-based filtering scheme. Base station 26 uses a memory 50 to hold a copy of the database information transmitted from the space segment 24. Base station 26 compares the record 51 for each mobile user 30 against the database information in

memory 50 and disseminates information to mobile users 30 only when relevant changes occur in memory 50. Refer to Column 7, lines 9-25. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include selecting information to be acquired by said receiver terminal from the storage source of information in accordance with supplementary information of contents, the motivation being to send relevant and updated information to destined mobile users without delay.

6. Claim 6, 11 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,915,207 to Dao et al in view of U.S. Patent No. 6,816,458 to Kroon.

Referring to claim 6, Dao et al do not disclose placing priority on contents to be acquired.

Kroon discloses in Figure 4 a message queue where messages destined particular radio stations are assigned a priority, which defines their order of transmission. Refer to Column 6, line 33 to Column 7, line 43. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include placing priority on contents to be acquired, the motivation being to allow high-priority packets to be transmitted before lower-priority packets.

Referring to claim 11, Dao et al do not disclose allowing contents having a time constraint as supplementary information to be inputted and transmitting said contents within a specified length of time in accordance with said supplementary information, or

accumulating said contents incapable of being transmitted within the time in preparation for a re-transmission thereof.

Kroon disclose in Figure 3 that all when a message is transmitted from a source station 100 to a destination station 130, the destination station 130 must return an acknowledgement to the source station 100 within time constraint (predetermined period of time). Packets that have not been acknowledged within the time constraint (predetermined period of time) are stored in the message queue of the source station 100 for retransmission to the destination station 130. Refer to Column 10, lines 44-58. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include allowing contents having a time constraint as supplementary information to be inputted and transmitting said contents within a specified length of time in accordance with said supplementary information, or accumulating said contents incapable of being transmitted within the time in preparation for a re-transmission thereof, the motivation being so that the source station knows which packets have been successfully sent and the destination station can request retransmission of lost packets from the source station within a predetermined period of time.

Referring to claim 13, refer to the rejection of claims 11 and 12.

7. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,915,207 to Dao et al in view of U.S. Patent No. 5,367,523 to Chang et al.

Dao et al do not disclose defining a service bandwidth for each application, and

discarding information at a probability defined for each terminal or user within the defined bandwidth when congestion has occurred.

Chang et al disclose in Figure 1 that service bandwidth is defined for each application (real-time and non real-time applications). Higher priority is assigned to real-time signals and is given more bandwidth so when congestion occurs, the non real-time signals are discarded before the real-time signals. Refer to Column 1, lines 14-26 and Column 6, lines 21-48. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include defining a service bandwidth for each application, and discarding information at a probability defined for each terminal or user within the defined bandwidth when congestion has occurred, the motivation being so that during congestion, higher priority packets will not be dropped and will be assigned more bandwidth than lower priority packets.

8. Claim 22 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,915,207 to Dao et al in view of U.S. Patent No. 6,519,241 to Theimer.

Dao et al do not disclose a vehicle information management portion for managing at least one or more of a vehicle location, a standstill condition of the vehicle, a traveling direction of the vehicle, date and time, weather, and user defined information.

Theimer discloses in Figure 3 a vehicle information management portion (local database client 7) that manages information about the vehicle location (GPS location) and traveling direction of the vehicle (destination). Refer to Column 6, lines 23-30. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include a vehicle information management portion for managing

at least one or more of a vehicle location, a traveling direction of the vehicle, date and time, weather, and user defined information, the motivation being it is necessary to establish communication with vehicles that are constantly in different locations.

Allowable Subject Matter

9. Claims 10, 14, 15, 18, 21, 23-26 and 29-31 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christine Ng whose telephone number is (571) 272-3124. The examiner can normally be reached on M-F; 8:00 am - 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chau Nguyen can be reached on (571) 272-3126. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

C. Ng CN
January 7, 2004

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